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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,175

08/11/2006

Julien Thollot

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5883

24498

7590

12/10/2008

Joseph J. Laks

Thomson Licensing LLC

2 Independence Way, Patent Operations

PO Box 5312

PRINCETON, NJ 08543

EXAMINER

CALLAWAY, JADE R

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,175	<b>Applicant(s)</b> THOLLOT ET AL.	
	<b>Examiner</b> JADE CALLAWAY	<b>Art Unit</b> 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 August 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendments to the claims and the abstract, in the submission dated 10/20/08, are acknowledged and accepted.

### ***Response to Arguments***

2. Applicant's arguments, see page 6, filed 10/20/08, with respect to the abstract have been fully considered and are persuasive. The objection of the specification has been withdrawn.
3. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

### ***Oath/Declaration***

4. The Application Data Sheet, providing the residence of each inventor, is acknowledged and accepted.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Allen et al. (2003/0227577).

Consider claims 1 and 2, Allen et al. teach (e.g. figures 4, 10, 17 and 23) an imager sequential illumination system comprising: a source (124, 126, 128, light

Art Unit: 2872

sources) emitting towards the imager a polychromatic light beam in a wavelength region comprising at least three primary colors (red, blue and green are emitted), a device for scrolling (e.g. 222, 426 or 428, color wheels) colored segments comprising at least three transmissive or reflective segments (red, blue and green regions), the scrolling device making it possible to scroll the segments over the optical path of the polychromatic light beam so that they successively cut the direction of propagation of the beam in the case where the segments are transmissive, or so that they successively reflect the beam in the case where the segments are reflective, the segments being of different colors, and each segment having a hue, a saturation, a transmissivity or reflectivity, and a size that is suitable for obtaining a colored beam exhibiting a primary color with a reference hue when it is scrolled over the optical path of the polychromatic light beam, wherein the colored segments are distributed in the scrolling device in an order such that the differences of energies between any two successive colored beams that follow one another, when the segments scroll over the optical path of the polychromatic light beam, are the least variable possible and minimized (the light sources can be modified to produce a desired gamut and image display), the energies being defined as being perceived by the visual system of a standard observer [0050-0056, 0070-0072, 0103-0104].

Consider claim 3, Allen et al. teach (e.g. figures 4, 10, 17 and 23) an illumination system wherein the scrolling device comprises several segments of like color so as to reduce the mean differences of excitation energies by distributing them over several intersegment transitions {the color wheel and the light sources are used to produce a

Art Unit: 2872

desired output gamut and image display} [0050-0056, 0070-0072, 0103-0104]. The recitation of “to reduce the mean differences of excitation energies” is considered to be intended use/functional language. It is respectfully noted that intended use and/or other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See **In re Casey, 152 USPQ 235 (CCPA 1967)** and **In re Otto, 136 USPQ 458, 459 (CCPA 1963)**.

Consider claim 4, Allen et al. teach an illumination system (e.g. figures 4, 10, 17 and 23) wherein the scrolling device comprises a different number of segments of primary colors so as to reduce the mean differences of excitation energies by distributing them over several intersegment transitions [0050-0056, 0070-0072, 0103-0104]. The recitation of “to reduce the mean differences of excitation energies” is considered to be intended use/functional language. It is respectfully noted that intended use and/or other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See **In re Casey, 152 USPQ 235 (CCPA 1967)** and **In re Otto, 136 USPQ 458, 459 (CCPA 1963)**.

Consider claim 5, Allen et al. teach an illumination system (e.g. figures 4, 10, 17 and 23) wherein the device for scrolling colored segments comprises a color wheel comprising at least three transmissive or reflective segments (red, blue and green

Art Unit: 2872

regions), the wheel being mounted on means of rotation so as to scroll the segments over the optical path of the light beam [0070-0072, 0103-0104].

Consider claim 6, Allen et al. teach (e.g. figures 4, 10, 17 and 23) a method of design of a color wheel for an imager color sequential illumination system, comprising: the step of providing the wheel (e.g. 222, 426 or 428, color wheels) having at least three transmissive or reflective segments (red, blue and green regions) that are suitable for obtaining successive beams of different colors when the segments scroll sequentially through a zone of transmission of an illumination beam, the segments being of different or identical colors, each segment having a hue, a saturation, a transmissivity or a reflectivity, and a size that is suitable for obtaining a colored beam exhibiting a reference hue when it crosses the zone of transmission of the illumination beam, a step of measuring (via 122, display appearance analyzer) the excitation energies of each colored beam induced by the various segments in the visual system of an observer, and a step of distributing the colored segments (the segments are distributed) over the color wheel in an order such that the differences of measured excitation energies between any two successive colored beams that follow one another (the sequence of the light sources can be modified to adjust the display image) when the segments scroll in the order through the transmission zone are the least variable possible (the light sources can be modified to produce a desired image gamut and display) [0050-0056, 0070-0072, 0103-0104].

Consider claim 7, Allen et al. teach (e.g. figures 4, 10, 17 and 23) a method wherein for a color wheel furnished with a determined number of segments each having

Art Unit: 2872

a determined dimension and making it possible to obtain a determined global color temperature (via the color gamut), the distributing of the segments over the wheel is carried out in such a way that the sum of the differences of energies between any two successive colored beams is the lowest possible (the light sources can be modified to produce a desired image gamut and display) [0050-0056, 0070-0072, 0103-0104].

Consider claims 8 and 10, Allen et al. teach (e.g. figures 4, 10, 17 and 23) a device of colored segments comprising a color wheel (e.g. 222, 426, 428, color wheels) with a plurality of juxtaposed zones of different colors (e.g. red, blue and green regions) making it possible to provide, by illumination of the various zones, beams of different colors, wherein the zones of different colors are arranged in such an order such that when they are successively illuminated according to the order, the differences of energies between any two successive colored beams that follow one another, when the illumination passes from one zone to another next zone in the order, are the least variable possible (the light sources can be modified to produce a desired image gamut and display), the energies being defined as perceived by the visual system of a standard observer [0050-0056, 0070-0072, 0103-0104].

Consider claim 9, Allen et al. teach (e.g. figures 4, 10, 17 and 23) a device of colored segments wherein the zones of different colors are arranged in an order such that the sum of the differences of energies between any two successive colored beams is the lowest possible (the light sources can be modified to produce a desired image gamut and display) [0050-0056, 0070-0072, 0103-0104].

***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JADE CALLAWAY whose telephone number is (571)272-8199. The examiner can normally be reached on Monday to Friday 7:00 am - 4:30 pm est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2872

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JRC  
/Jade R. Callaway/  
Examiner, Art Unit 2872

/Arnel C. Lavarias/  
Primary Examiner, Art Unit 2872